

MINUTES OF THE SENATE TRANSPORTATION COMMITTEE

The meeting was called to order by Chairman Les Donovan at 8:30 a.m. on February 17, 2004 in Room 527-S of the Capitol.

All members were present except:
Senator David Adkins-absent

Committee staff present:
Hank Avila, Legislative Research Department
Bruce Kinzie, Revisors of Statutes
Marian F. Holeman, Committee Secretary

Conferees appearing before the committee:
Senator Dave Jackson
Senator Robert Tyson
David Church, KDOT Bureau Chief, Traffic Engineering
Tom Whitaker, Kansas Motor Carriers Assn.
Larry Baer, League of Kansas Municipalities

Others attending:
See Attached List.

SB 384: Increasing maximum speed limit on certain highways

Senator Jackson explained the rationale behind the request for this bill (Attachment 1). Senator Robert Tyson addressed safety, as well as economic development and tourism aspects of the bill. Except for the west coast states, Kansas is the only western state with a 70 mph speed limit. All others are higher. Nebraska's I-80 has approximately 50% higher traffic rate than Kansas' I-70. However, the difference in safety from I-70 is less than 1 death per 100 million miles traveled. He urged passage of this bill to bring more people across the State, because we need the economic development. I-70 needs to be the "Main Street of Kansas," especially in western Kansas. He further addressed the need to bring people to Kansas to show them what we have to offer; and the need to be consistent with the states around us (Attachment 2). David Church, Chief of the Bureau of Traffic Engineering, KDOT, explained the difference between an expressway which has intersections and a freeway which is totally access controlled. On a freeway you can only enter or exit at an interchange. All interstates are considered "freeways." KDOT has no problem with increasing the speed limit. Mr. Church advised that, should the bill become law, there would still be some Kansas highways with 70 mph speed limits. He suggested modifying page one (line 40) and page two (line 6) in the current Bill from 65 to 70 mph (Attachment 3). Kansas Department of Transportation (KDOT) will still have the authority to set speed limits as they deem necessary for safety purposes. The reported estimation of \$300 each for new speed limit signs is for new signs, not decals. Closed hearing on **SB 384**.

SB 501: Compression release engine braking system

Tom Whitaker, executive director, Kansas Motor Carriers Association (KMCA), addressed the need for this bill. Present law does not adequately address the problem. KMCA believes the bill is a practical and uniform approach to assure compression release engine braking systems are used properly (Attachment 4). Larry Baer, League of Kansas Municipalities spoke in support of the bill. City ordinances have no extraterritorial control authority and this bill is a good example of state legislation that will work cooperatively with local control (Attachment 5). Senator Jackson, who had requested the bill introduction, added his voice in support of the measure; explaining that this measure was passed by both houses of the legislature last year, but somehow became lost and did not become law (Attachment 6).

Final action

Following discussion of **SB 501**, Senator Schodorf moved to recommend the bill favorable for passage. Senator Lyon seconded the motion. Motion carried.

CONTINUATION SHEET

MINUTES OF THE SENATE TRANSPORTATION COMMITTEE at 8:30 a.m. on February 17, 2004 in Room 527-S of the Capitol.

SB 330: Warning devices on garbage trucks

Members returned to consideration of **SB 330**. Discussed several issues regarding the bill including the fact that some local cities have ordinances regulating time of day when these devices can or cannot be used. It is not the intent of this legislation to negate local ordinances. Discussed an amendment to allow local units of government to continue implementing such ordinances. Discussed OSHA standards for the devices and the grey areas in those standards. This bill would provide clarification. Big company trucks are equipped with these devices; however, some private haulers may not have them. Senator Goodwin moved to adopt the amendment. Senator Schodorf seconded the motion. Motion carried. Senator Goodwin moved to recommend the bill, as amended, favorable for passage. Senator Schodorf seconded the motion. Motion carried.

Approval of minutes

Senator Salmans moved to approve minutes of February 10 and February 11, 2004. Senator Goodwin seconded the motion. Motion carried.

Meeting adjourned at 9:20 a.m.

The next meeting is scheduled for February 18, 2004.

SENATE TRANSPORTATION COMMITTEE
GUEST LIST

DATE: February 17, 2004

NAME	REPRESENTING
Diane Albert	KDK
Ghan Erikson	DOB
David Church	KDOT, Traff. Eng.
Floyd	
Larry R. Baer	LKMA
Tom Whitaker	Ks Motor Carriers Assn



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TOPEKA STATE HOSPITAL CEMETERY
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SENATE CHAMBER

Testimony on Senate Bill 384
Before the Senate Transportation Committee
Les Donovan, Chairman

This bill simply raises the maximum speed limit by 5 mph to 75 mph, similar to that of Colorado, Nebraska, and other states.

Our Committee Chair has graciously agreed to hear this bill this morning as a result of my request, and I wish to thank Senator Donovan and the Committee for hearing this bill today.

That our highways are superior to those in the surrounding states is a given. Increasing the speed limit from 55 mph to 70 mph did not cause any permanent increase in traffic deaths per 100 million miles driven and no credible study has been done that shows an increase in deaths per 100 million miles driven when the speed limit increases to 75 mph.

This bill reduces the grace limit from 10 mph to 5 mph beyond the posted limit. This is the miles per hour over the posted speed limit which triggers the moving violation and the "points" assigned by insurance companies.

Mr. Chairman, I would yield to our colleague the Senator from Linn, Senator Tyson, for any questions and further testimony on this bill.

Thank You,

David D. Jackson
Senator, 18th District

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SENATE TRANSPORTATION COMMITTEE
DATE 2-17-04
ATTACHMENT: 1

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TOPEKA

SENATE CHAMBER

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 MEMBER: AGRICULTURE
 UTILITIES
 JOINT COMMITTEE ON
 SPECIAL CLAIMS AGAINST
 THE STATE
<http://skyways.lib.ks.us/kansas/government/tyson/>
 email: rtyson@ink.org

Testimony on SB 384
Senate Transportation Committee
 February 17, 2004

Thank you Chairman Donovan and members of the Senate Transportation Committee for hearing SB 384 and allowing me to testify in its favor today. SB 384 simply raises the rural interstate speed limit from 70 mph to 75 mph. It also reduces the speeding cushion for a moving traffic violation for interstate highways from 10 mph to 5 mph. The result is that 80 mph is still the Kansas interstate speed at which a moving violation would occur and reported to your insurance company. That does not change with this bill.

So, why raise the speed limit 5 mph? Surely more lives will be lost if we do.

When considering this bill, safety is certainly one of the important factors. I also know that accidents will increase upon raising this speed limit, however I believe that the raise in accidents will be caused by the increased traffic generated and not by the 5 mph alone.

The passage of this bill will generate economic development all across Kansas. I travel I-70 and I-80 on a regular basis and I notice a large difference in the two well-known interstates. First Linda and I noticed the increased traffic on I-80 in Nebraska over I-70 in Kansas. There is approximately a 40% to 50% higher volume on I-80. Also, we noticed that there was much more economic development generated along I-80 such as more restaurants, motels, entertainment, shops and truck stops. Upon asking questions and looking around it became apparent why I-80 has more traffic, tourism and economic development - "time saved".

Americans are in a hurry. The following is an excerpt from an article written in a Nebraska newspaper:

(Aurora News-Register, Jan 8, 2003),
 "I-80 DEATH TOLL RAISES YELLOW CAUTION FLAG"

"Anyone with a driver's license knows that the speed limit was raised to 75 mph in 1996, though no one was complaining at the time. We are by our very nature a hurry-up society, and that change went a long way to our getting from point A to point B a whole lot faster.My family drove to Colorado over the Christmas holiday, taking the interstate almost all the way to our destination just across the Nebraska border. Normally we get off I-80 around Lexington to make our way

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SENATE TRANSPORTATION COMMITTEE
 — DATE 2-17-04 —
 ATTACHMENT: 2

into the southwest corner of the state in Imperial, but this time we were headed to Holyoke, Colo., so we took the high road, so to speak, with a higher speed limit, no stops and clear sailing all the way.

We arrived 30 minutes early, actually taking less time to get to a place that's 36 miles beyond where we normally stop. That's the benefit of I-80 travel getting there fast, without interruption, and get on with what you're going to do.

That's the appeal, obviously, to one of America's most well-traveled roadways. Interstate travel has picked up significantly over the years, with the latest count showing more than 24,000 vehicles per day passing by our own 332 Interchange south of Aurora. . . . You can get where you're going in a hurry on I-80, and that's worth valuable time and money in a world where we can't seem to get enough of either. But at what costs?

The latest highway safety report raises a yellow caution flag that deserves some serious attention. There may or may not be much public pressure to review the 75 mph limit, but we can no longer deny that the convenience provided by I-80 speed comes at our own risk. . . . Let's face it, we Americans are in a hurry whether we need to be or not. Kurt Johnson

I-80 in Nebraska is more dangerous than I-70 in Kansas due to this increased traffic. Where you have a 35,000-traffic count, as I-80 does on the 59 miles between Lincoln and Omaha, you have a severe traffic problem. In 2002 the death toll was unusually high at 22 however, as the following article points out, in 2003 from Jan through Dec 7 that same stretch lost 9 lives. I was unable to get the 2003 I-80 count, however it should be considerable lower than 2002. Nebraska is in the process of adding two more lanes along this stretch.

(Lincoln Journal Star, Dec 7, 2003) by Algis Laukaitis

"...Last year, there were 1,605 crashes along the 59 mile segment that links the state's two largest cities and four of the most populous counties: Douglas, Sarpy, Cass and Lancaster. Twenty-two people died in the area in 2002, and nine have died so far this year, according to the Nebraska Office of Highway Safety."

The reason for this 5mph increase is to promote economic development and tourism across Kansas. We need to join with our neighboring gateway states and not be a peninsula of restricted travel. The traveling public knows they can save 40 minutes by staying out of Kansas. If we want to increase safety, there are other ways than lowering traffic count through reduced speed. With the added speed and traffic on I-80 the difference in safety from I-70 is less than 1 death for each 100 million miles traveled. I-80 is called Nebraska's main street. Let's do the same for Kansas and I-70.

I ask for your support on SB 384. Thank you.

Kansas Dept. of Transportation

Nebraska Dept. of Roads

I-70 Deaths by Yr.

I-80 Deaths by Yr.

1. Colo. St Line to w city limits Kansas City

Wy. To Metro Omaha

1998	9	-
1999	20	
2000	19	
2001	21	
2002	15	
2003	27	I-70 deaths

33
33
34
22
53

2002 traffic count between 1 & 2	26,115
	4,540

34,450
6,610

2. Colo. to West city limits Lawrence

Wy to Lincoln

1998	9
1999	16
2000	18
2001	19
2002	13

20
27
25
10
32

2002 traffic count between 2 & 3	17,700
	3,650

24,800
7,600

3. Colo. to west city limits Salina

Wy to Kearney

1998	7
1999	9
2000	14
2001	11
2002	10

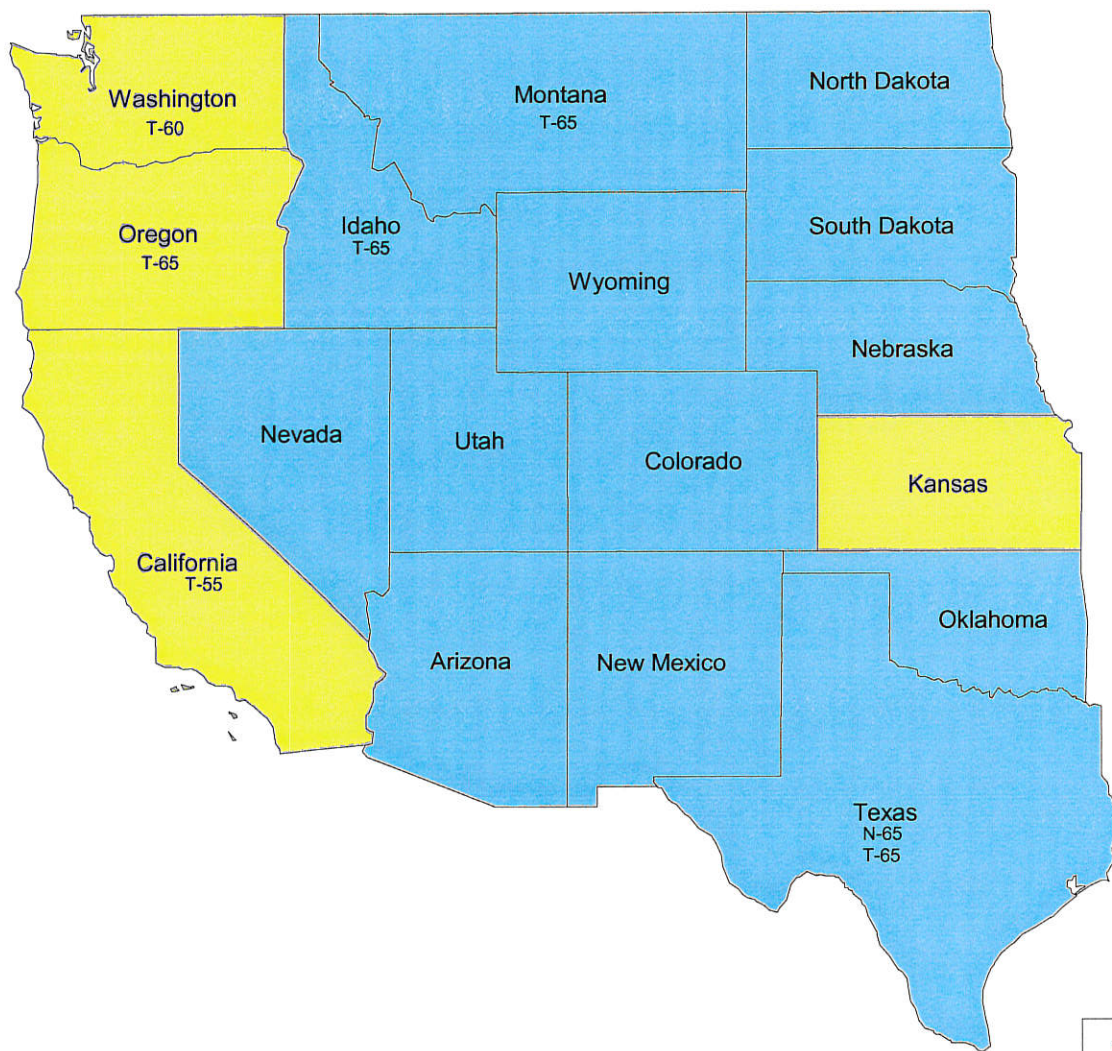
10
19
17
9
12

2002 traffic between 3 & Colo line	10,400
	3,150

15,200
6,350

Highway Speed Limits - Western States

24



Legend:

- States with 75 mph speed limits
- States with 70 mph speed limits
- T-65 Truck Speed Limit
- N-65 Night Speed Limit

Kansas Department of Transportation

January 29, 2004

To: William Watts
Office Chief, Management and Budget

Attention: Ron McMurry
Strategic Planning Manager

From: Robert S. House *RSH*
Research Analyst, Bureau of Transportation Planning

Subject: *2327*
79 1.70; from the CO state line, to Salina
5-year Fatality Accident Rate

The motor vehicle accident rate your office requested for the subject location has been calculated. The rate is 1.00 fatal accident for every 100,000,000 vehicle miles traveled. This rate reflects data from January 1, 1998 through December 31, 2002.

If you have any questions, contact Bob House at 6-0456.

RSH:rsh

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NEBRASKA INTERSTATE 80 CRASH DATA

Lincoln to Wyoming border

YEAR	FATAL	INJURY	PDO	TOTAL	RATE*
1998	20	410	697	1,127	1.98
1999	27	428	660	1,115	1.86
2000	25	448	676	1,149	1.89
2001	10	421	743	1,174	1.87
2002	32	355	704	1,091	1.70
TOTAL	114	2,062	3,480	5,656	1.86

Kearney to Wyoming border

YEAR	FATAL	INJURY	PDO	TOTAL	RATE*
1998	10	214	352	576	1.83
1999	19	241	369	629	1.89
2000	17	241	355	613	1.80
2001	9	254	376	639	1.81
2002	12	182	316	510	1.42
TOTAL	67	1,132	1,768	2,967	1.75

* Total crashes per hundred million vehicle miles traveled

Highway Safety Section
Nebraska Department of Roads
February 4, 2004

Kansas Department of Transportation

MEMO TO: Mary Galligan
Legislative Research Department

FROM: William E. Watts, Chief of Management and Budget
Kansas Department of Transportation

DATE: February 6, 2004

SUBJECT: I-70 Deaths by Years: 1998 - 2002

From the Colorado state line, east to the west city limits of Kansas City:

- 1998 – 9 deaths
- 1999 – 20 deaths
- 2000 – 19 deaths
- 2001 – 21 deaths
- 2002 – 15 deaths

From the Colorado state line, east to the West city limits of Lawrence:

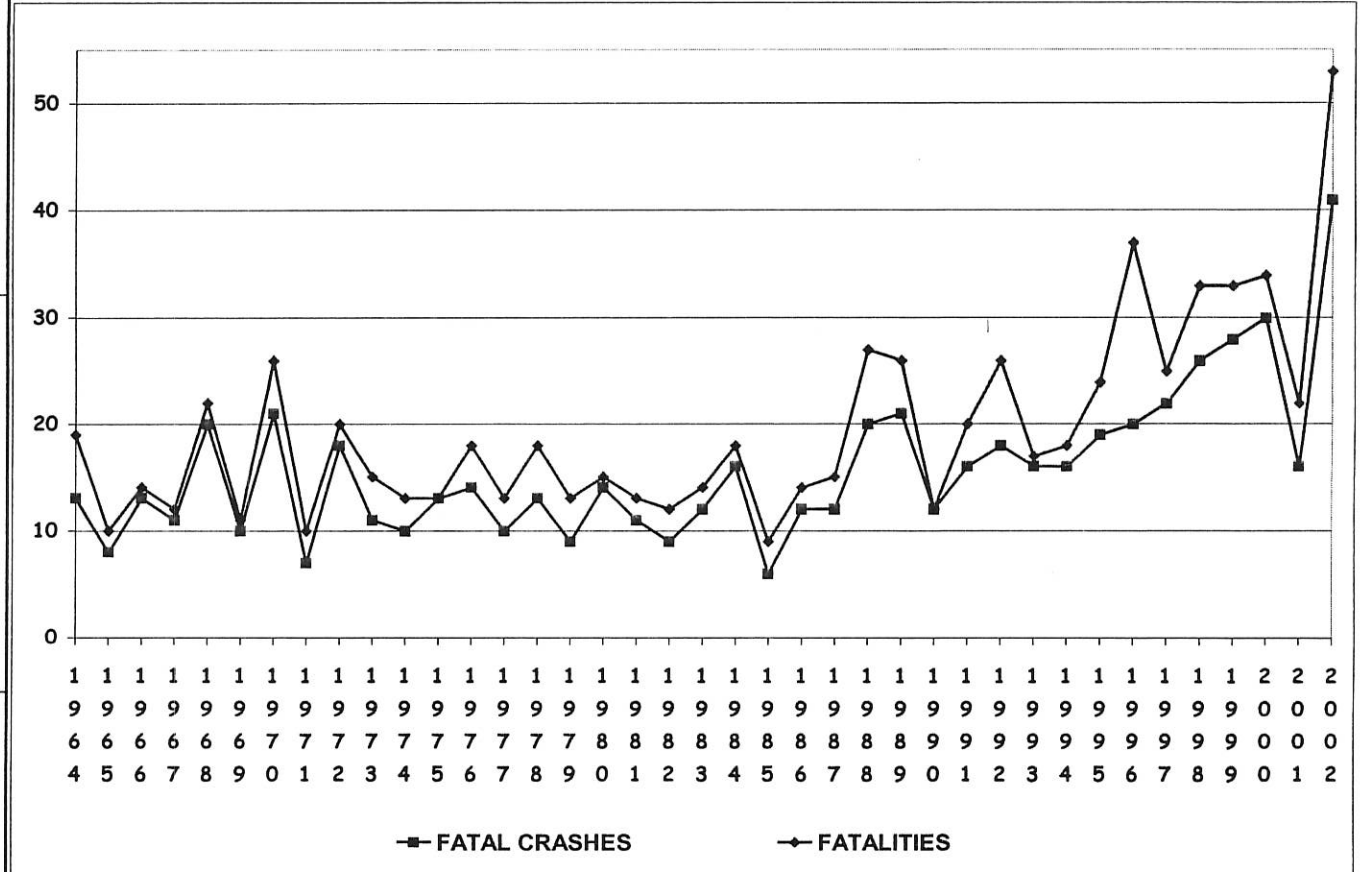
- 1998 – 9 deaths
- 1999 – 16 deaths
- 2000 – 18 deaths
- 2001 – 19 deaths
- 2002 – 13 deaths

From the Colorado state line, east to the west city limits of Salina:

- 1998 – 7 deaths
- 1999 – 9 deaths
- 2000 – 14 deaths
- 2001 – 11deaths
- 2002 – 10 deaths

NEBRASKA RURAL INTERSTATE TRAFFIC FATALITIES

MPH	YEAR	FATAL CRASHES	FATALITIES
75	1964	13	19
75	1965	8	10
75	1966	13	14
75	1967	11	12
75	1968	20	22
75	1969	10	11
75	1970	21	26
75	1971	7	10
75	1972	18	20
75	1973	11	15
55 - 65 - 55	1974	10	13
55	1975	13	13
55	1976	14	18
55	1977	10	13
55	1978	13	18
55	1979	9	13
55	1980	14	15
55	1981	11	13
55	1982	9	12
55	1983	12	14
55	1984	16	18
55	1985	6	9
55	1986	12	14
55	1987	12	15
65	1988	20	27
65	1989	21	26
65	1990	12	12
65	1991	16	20
65	1992	18	26
65	1993	16	17
65	1994	16	18
65	1995	19	24
75	1996	20	37
75	1997	22	25
75	1998	26	33
75	1999	28	33
75	2000	30	34
75	2001	16	22
75	2002	41	53



- * January 1, 1974
- * March 1, 1974
- * April 28, 1987
- * June 1, 1996
- * September 1, 1996

- Speed Limit Decreased (75 mph to 65 mph)
- Speed Limit Decreased (65 mph to 55 mph)
- Interstate Speed Limit Increased (55 mph to 65 mph)
- Interstate Speed Limit Increased (65 mph to 75 mph)
- State and Secondary Road Speed Increases

As of January 21, 2003

KANSAS

DEPARTMENT OF TRANSPORTATION
DEB MILLER, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

TESTIMONY BEFORE THE SENATE TRANSPORTATION COMMITTEE

RELATING TO SENATE BILL 384 MAXIMUM SPEED LIMITS

FEBRUARY 17, 2004

Mr. Chairman and Members of the Committee:

I am David Church, Chief of the Bureau of Traffic Engineering, for the Kansas Department of Transportation (KDOT). On behalf of KDOT, I appreciate the opportunity to present information regarding Senate Bill 384. This bill would allow the Secretary of Transportation the authority to change the speed limits to a maximum of 75 mph on separated multilane highways. In general, we support this bill.

A separate multilane highway can be categorized as either a freeway or an expressway. An expressway commonly has at grade intersections. A freeway is totally access controlled; you can only enter or exit at an interchange. All interstates are considered freeways. It may be appropriate to consider revising the bill to allow expressways to remain at a maximum of 70 mph and freeways to be posted at a maximum of 75 mph; however, if the bill remains as written the Secretary would have this authority. It is likely that KDOT would consider raising the speed limit on *rural freeways only*.

Expressways have at grade intersections so a higher speed limit might not be appropriate for safety reasons. The speed limits on our urban freeways have been set based on engineering studies. They range from 55 to 65 mph. We would likely not increase speed limits in these areas.

It may be appropriate to post some or all of our rural freeways at 75 mph. We do not believe that raising the speed limit 5 mph would be detrimental to safety. Crashes are normally associated with the variation in traffic speeds instead of the absolute speed. At 75 mph it is likely that the speed variation would actually be lower. When we raised the speed limits from 65 to 70 a few years ago we did not see an increase in crashes.

To the best of my knowledge there are currently eleven states that have their rural interstate speed limits posted at 75 mph for passenger cars – Arizona, Colorado, Idaho, Montana,

OFFICE OF THE SECRETARY OF
DOCKING STATE OFFICE BUILDING, 915 SW HARRISON
VOICE 785-296-3461 TTY 785-296-3585 FAX 71

SENATE TRANSPORTATION COMMITTEE
DATE 2-17-04
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Senate Bill 384
Senate Transportation Committee
Page 2
February 17, 2004

Nebraska, Nevada, New Mexico, N. Dakota, S. Dakota, Utah, and Wyoming. We are not aware of any problems associated with their posting their speed limits at 75 mph.

If this bill becomes law, there would still be highways in Kansas with a speed limit of 70 mph. Therefore, you may want to modify page one (line 40) and page two (line 6) in the current Bill from 65 to 70 mph.

Thank you, I would be happy to answer any questions you might have.

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KANSAS MOTOR CARRIERS ASSOCIATION

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Executive Director

LEGISLATIVE TESTIMONY

by the

Kansas Motor Carriers Association

SUPPORTING SENATE BILL NO. 501

Presented before the Senate Transportation Committee
Senator Les Donovan, Chairman
Tuesday, February 17, 2004

MR. CHAIRMAN AND MEMBERS OF THE SENATE TRANSPORTATION COMMITTEE:

I am Tom Whitaker, executive director of the Kansas Motor Carriers Association. I appear here this morning representing our member companies in support of Senate Bill No. 501.

What is a compression release engine braking system? Compression release engine braking systems, simply known as engine brakes or Jake brakes, provide the truck with a supplemental retarding device, providing drivers a measure of reassurance while traveling hilly terrain, and saving on engine and brake wear and tear. Because of a critical value associated with engine brakes, over 70% of all new heavy-duty trucks are equipped with these devices. Vehicles equipped with these devices are more efficient and productive and are also safer as they enhance driver control.

Engine braking devices are not loud when the truck is equipped with a muffler. The problem is that a small percentage of trucks do not have a muffler. In tests conducted on these braking systems trucks fitted with a standard muffler produced a noise level of 83dB with the engine brake on. This is under the federal noise limits. In contrast those trucks with no muffler and the engine brake applied produce a noise level of 101 dB. To the human ear this sounds twice as loud as a muffled truck.

What is current law? All new trucks, which have been manufactured for the past 20 years, have been required to have a muffler, which meets EPA noise specifications. Current state law requires that all vehicles must be equipped with a muffler. Violation of this law is a traffic infraction punishable by a fine of \$30.00 plus court costs. Unfortunately a limited number of truck owners have removed the mufflers from their vehicles. Because of the low fine, the existing law does not serve as a significant deterrent of this practice.

SENATE TRANSPORTATION COMMITTEE

DATE 2-17-04

ATTACHMENT: 4

Legislative Testimony – February 17, 2004 – Page 2

Senate Bill 501 makes it unlawful to operate a vehicle with a compression release engine braking system without being equipped with a muffler. The fine for violating the provisions of SB 501 is \$60.00 plus \$54.00 in court costs.

SB 501 is patterned after Colorado law. Similar laws have been adopted in Arizona, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

KMCA believes SB 501 is a practical and uniform approach to assure that compression release engine braking systems are used properly. We ask the Senate Transportation Committee to report SB 501 favorably. Thank you for the opportunity to appear before you. We would be pleased to stand for questions.



Vehicle Noise Levels and Compression Release Engine Braking

INTRODUCTION

This document is intended to provide the reader with information about commercial vehicle noise and its relationship with compression release engine brakes. This relationship is a subject of community concern and often results in the posting of "No Engine Brake" signs along roads and highways. Data is presented illustrating the relationship between vehicle noise and the condition of the vehicle's exhaust system. This data identifies improperly muffled vehicles as the principal cause of the vehicle noise that concerns communities. This document examines existing regulations that govern vehicle noise levels and presents suggestions for effectively addressing noise concerns at the community level. References are provided for further reading on the subjects of engine braking and vehicle noise.

COMPRESSION RELEASE ENGINE BRAKES

Compression release engine brakes (referred to hereafter as engine brakes) are the most popular type of supplemental vehicle retarder used in North America. Their function is to turn a power producing diesel engine into a power absorbing air compressor. It does this by quickly opening the exhaust valve near top dead center of the compression stroke. This causes a sudden release of compressed air from an engine cylinder into the exhaust system. This is what causes the characteristic staccato sound of an engine brake in operation. The engine brake is activated only when the driver's foot is off of the accelerator pedal and no fuel is being injected into the cylinder.

It is well known that the stopping power available from a vehicle's service (or wheel) brakes decreases significantly as the brake lining temperature increases. One of the uses of engine brakes on commercial vehicles is to help control vehicle speed on long downgrades. Minimizing the use of the vehicle's service brakes virtually eliminates the likelihood of overheating the brakes and thus helps to avoid dangerous brake fade. Reduced usage of the service brakes on engine brake equipped vehicles also leads to lower maintenance costs through reduced brake lining wear. Vehicles equipped with engine brakes are more efficient and productive to operate. Enhanced driver control and a reduced risk of brake fade also means safer interaction between all of the vehicles operating on public roadways. The overall result of engine brake usage is of significant value to the trucking industry and to the general public as well.

The need for equipping commercial vehicles with engine brakes is greater today than ever before. Vehicle weight and speed limits have been increasing. At the same time the vehicle's natural retarding power has decreased due to reductions in aerodynamic drag and rolling resistance. These improvements are beneficial in terms of vehicle fuel consumption and operating cost. However, they require that more work be done by the service brakes to maintain speeds on long down grades or slow the vehicle. The increased load being placed on vehicle service brakes led to the issuance of an industry practice recommending the use of supplemental retarders [7]. In addition to supplementing the vehicle's service brakes, engine brakes are also being integrated into other vehicle functions such as cruise control, automatically shifted manual transmissions, and the newly introduced collision avoidance systems. These factors are why the majority of heavy-duty vehicles produced in North America today are equipped with engine brakes when delivered from the vehicle manufacturer.

4-3

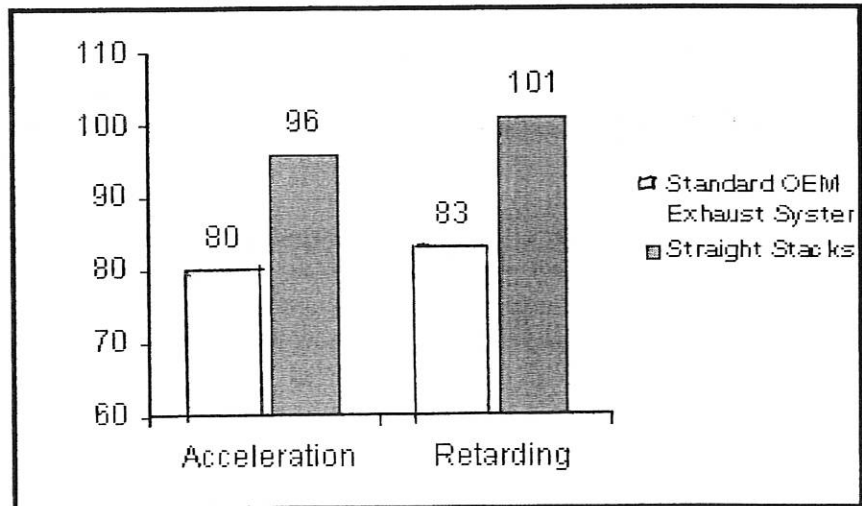
ABOUT NOISE

Residents near steep downgrades, highway exits and curves in some communities in North America have expressed concerns about commercial vehicle noise. These concerns frequently identify engine brakes, due to their characteristic sound, as the cause of the objectionable noise. Signs prohibiting engine brake usage have been posted in some communities. The trucking industry is sensitive to these concerns and has studied the issue with regard to both new and in use trucks.

Truck, engine and equipment manufacturer studies have consistently found that improperly muffled vehicles are the root cause of this noise issue. Vehicle operating sound levels have been shown repeatedly to be much higher for vehicles with improper, defective or deteriorated mufflers. The problem is most pronounced on vehicles equipped with "straight stack" exhaust systems (i.e., no muffler). Studies have found that the sound level from "straight stacks" is 16 to 22 dB(A) higher than from original equipment mufflers [1]. Studies have also shown that the operation of an engine brake produces sound levels that are similar to those produced during acceleration on properly muffled vehicles [2].

Figure 1 shows total vehicle sound level data for a typical heavy-duty diesel powered vehicle. Sound levels are measured in 'A' weighted decibels or dB(A). This is a logarithmic scale weighted to the sensitivity of human hearing. Each doubling of a sound source will increase the sound level by 3 dB(A). An 18 dB(A) increase corresponds to a 64 fold increase in the sound source. Additional information on other vehicle/engine combinations is presented in Society of Automotive Engineers (SAE) papers [1] and [2].

Figure 1. Typical Heavy-Duty Vehicle Results



Improper, defective or deteriorated mufflers will increase vehicle sound levels over those of properly maintained exhaust systems. The magnitude of the increase though is not as large as that for "straight stacks". A question that can be asked is how prevalent are improperly muffled exhaust systems on commercial vehicles? One survey observed a moderate traffic volume consisting of about 300 trucks per hour traveling on a stretch of Indiana highway. It found 5.3 percent of the trucks did not have a functioning muffler; in fact, 2.4 percent of the vehicles inspected were operating with "straight stacks" installed [1].

From this data one can conclude that residents living near that stretch of highway were on average exposed to 16 vehicles per hour with improperly muffled exhaust systems. These vehicles would be operating beyond acceptable noise levels during acceleration as well as retarding. Overall, this information supports the position that the root cause of objectionable vehicle noise is improperly muffled vehicles.

4-4

ABOUT THE LAW

All new vehicles must comply with EPA noise regulations. The maximum permitted noise level was set to 83 dB(A) in 1979 and later reduced to 80 dB(A) in 1988. The overall design and manufacture of heavy-duty trucks, including their exhaust systems, results in all new vehicles meeting the applicable regulations when they leave their manufacturer's factory.

The EPA regulations prohibit "The removal or rendering inoperative by any person, other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use". The EPA regulations also prohibit the use of a vehicle that has had the noise control system rendered inoperative. This is stated clearly on a label required on all vehicles sold in the U.S. and is fully explained in the operator's manual for every new truck [3]. The improperly muffled vehicles, especially those with straight stacks, are not operating in compliance with current federal regulations.

Most states have adopted motor vehicle regulations that address the configuration and condition of vehicles operated on their roads and highways. These regulations typically require that a vehicle be equipped with a proper exhaust system and a muffler. "Straight stacks" are not in compliance with either the federal or the state regulations.

WHAT CAN BE DONE

The current federal and state regulations addressing exhaust system configuration and maintenance are not always aggressively enforced. This has led communities to adopt ordinances of their own and post signs prohibiting engine brake usage. Prohibiting engine brake use attempts to solve the problem without addressing the real cause. Any action taken should address the small percentage of vehicles with improperly muffled exhaust systems that are at the root of the problem.

The most direct solution is to visually inspect vehicles for the presence of a muffler. This type of inspection is relatively simple to implement once some basic definitions of what constitutes a muffler are established. The inspection could be done as part of current roadside inspections with minimal additional training and effort. This action would address the root cause of the community problem and would eliminate the most severe noise offenders. This type of inspection would be the simplest way to start addressing the noise problem.

The drawback to a simple inspection is that it may not catch all offenders. Improper, defective or deteriorated mufflers that appear intact from the outside may be missed. Detecting these cases requires a roadside noise test. The EPA sets forth procedures in its regulations based on the SAE J366 Recommended Practice [4]. The International Standards Organization (ISO) also has procedures for driveby testing, described in ISO 362 [5]. A stationary test could be used to detect vehicles that are noise offenders [6]. However, active noise tests for inspection purposes are complicated by various vehicle and muffler configurations, and require calibrated noise-testing equipment and trained operators. Therefore visual inspection for the presence of mufflers is the simplest and most immediate way to address commercial vehicle noise.

If a community determines that a sign is still required, wording similar to the following examples is suggested. Signs under Oregon State Vehicle Code Section 811.492 read: Unmuffled Engine Brake Use Prohibited Except In Emergencies. Signs under Minnesota Traffic Regulations Section 169.69 read: Vehicle Noise Laws Enforced. Both address the root cause of the problem, do not adversely effect properly maintained vehicles and acknowledge the positive impact of engine brakes on operating safety.

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CONCLUSIONS

Enforcement of current muffler regulations is the most direct way to address the noise issue. It will have benefits to the trucking industry as well as to the public. Installing the mufflers required by federal and most state motor vehicle regulations on vehicles that are operated without a muffler will reduce noise levels by 16 to 22 dB(A). This does not necessitate anything more than proper maintenance using original equipment mufflers or replacement systems that are equivalent to those provided by the vehicle manufacturer. Signs prohibiting engine brake usage should be eliminated. This is especially true since most heavy-duty vehicles are properly muffled and do not cause offensive noise when operating their engine brakes.

The benefits to the public are two-fold. First, proper mufflers effectively control objectionable noise during all modes of vehicle operation, not just retarding. This means that objectionable noise is controlled in congested city streets, stop and go traffic, climbing hills, as well as in retarding situations. The second public benefit comes indirectly in the goods we all use that are moved by truck. The improved effectiveness of trucks in terms of operating economy, reduced trip times and improved operating safety will be reflected in the cost of the goods they transport. Truckers will be free to utilize their engine brakes and realize the economic and operating benefits they were purchased to provide. The result will be more efficient transportation, safer vehicles and safer highways.

The benefits to properly muffling trucks and allowing engine brake usage to the trucking industry are also compelling. Drivers will benefit by being exposed to less on-the-job noise. Vehicle operating safety and productivity will be improved. Controlling the noise level of vehicles by installing proper mufflers will also serve to improve the overall image of the trucking industry.

REFERENCES:

1. Reinhart, Thomas E., "U.S. Vehicle Noise Regulations and the Effects of Vehicle Condition", SAE Paper 912709, Society of Automotive Engineers, Inc., 1991.
2. Reinhart, Thomas E. and Wahl, Thomas J., "Reducing Compression Brake Noise", SAE Paper 971870, Society of Automotive Engineers, Inc., 1997.
3. Environmental Protection Agency, "Noise Emission Standards for Transportation Equipment", Title 40, Code of Federal Regulations, Chapter 1, Part 205, Subpart B - Medium and Heavy Trucks.
4. Society of Automotive Engineers Recommended Practice J366, Sound Level for Heavy Trucks and Buses.
5. ISO 362 - Acoustics - Measurement of Noise Emitted by Accelerating Road Vehicles - Engineering Method.
6. Wahl, Thomas J. and Reinhart, Thomas E., "Developing a Test Procedure for Compression Brake Noise", SAE Paper 972038, Society of Automotive Engineers, Inc., 1997.
7. "RP 636 - Specifying Auxiliary Retarders", 1998-1999 Recommended Engineering Practices Manual, The Maintenance Council - American Trucking Associations, Inc., 1998.



League of Kansas Municipalities

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Date: February 17, 2004
To: Senate Transportation Committee
From: Larry R. Baer
Assistant General Counsel
Re: SB 501 - Testimony in Support

Thank you for allowing me to appear before you today on behalf of the League of Kansas Municipalities and its member cities to present testimony in support of SB 501. SB 501 is very similar to HB 2693 which was heard two years ago.

SB 501 would prohibit the use or operation of a compression release engine braking system, or "Jake brake" as it is known in the vernacular, without appropriate mufflers installed.

Many cities have adopted "Jake brake" ordinances to minimize or eliminate the loud and annoying noise that results from the operation or use of the braking system. However, a city ordinance prohibiting the use of the braking system can only be enforced within the city limits – cities having no extraterritorial traffic control authority. The braking system usage and the resulting noise occur outside of the city limits as well. Since cities have no extraterritorial traffic control jurisdiction, state control is also necessary.

The League supports SB 501. It is a good example of state legislation that will work cooperatively with local control. The League recommends that this committee pass SB 501 out favorably.

Thank you for your consideration of this matter. I will be happy to stand for questions.

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SENATE TRANSPORTATION COMMITTEE
- DATE 2-17-04 -
ATTACHMENT: 5



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SENATE CHAMBER

Testimony for Senate Bill 501
Before the Senate Transportation Committee
Les Donovan, Chairman

Thank you Mr. Chairman, Senator Donovan, for your attention to this issue. SB 501 concerns the use of compression braking systems on diesel trucks, commonly known as "Jake Brakes". This bill simply requires that if this system is installed for braking purposes, that the truck must have an operating muffler system in place.

This issue was passed as an amendment by both houses of the legislature last year but the bill was somehow modified or lost in conference and did not become law.

Diesel trucks that are in interstate commerce are already required to have muffler equipment in place so this bill is intended to make the use of mufflers uniform.

This issue was requested by a homeowner's association on Highway 75 North of Topeka and has also been requested by constituents living at the city limits of Silver Lake and Rossville along U.S. Highway 24.

The Kansas Motor Carriers Association does not oppose this bill, so Mr. Chairman and members of the Committee, I would ask for your support and to recommend this bill favorably for passage.

I would stand for questions.

Thank You,

David D. Jackson
Senator, 18th District

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SENATE TRANSPORTATION COMMITTEE
DATE 2-17-04
ATTACHMENT: 6